

# **THROUGH A CLOUDED PRISM: FORECASTING INTRA-STATE CONFLICTS AT THE OPERATIONAL LEVEL**

**A MONOGRAPH  
BY  
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## ABSTRACT

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This monograph discusses the use of the U.S. Southern Command Small Wars Operational Research Directorate (SWORD) model along with traditional intelligence preparation of the battlefield (IPB) to forecast the direction of intra-state conflicts at the operational level. Enabling factors for forecasting are: the information input to the model, the command and control structure, and selection and training of personnel and organizations.

The monograph first examines the current national security environment, especially the increase in the number of stability and support operations. Next, the foundation and pitfalls of forecasting military affairs are examined. The theory of revolutionary conflict is introduced, and the SWORD model is provided as a means to forecast these conflicts. IPB at the strategic and operational level is discussed, with its application to the SWORD model. Enabling factors and their impact on the ability to conduct forecasting is followed by a dialogue of the forecasting system in totality.

The synergy of the various enablers on the IPB/SWORD model system provides insights into the issues operational planners need to consider during stability and support operations in a low intensity conflict environment. Degradation of the enabling factors impairs the ability to conduct forecasts.

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Table of Contents	Page
I. Introduction . . . . .	1
II. Terms, Definitions, and Variables . . . . .	6
III. Forecasting . . . . .	6
IV. Model for Forecasting Insurgency Conflicts . . . . .	9
V. Intelligence Processing and Analysis . . . . .	21
VI. Practical Considerations . . . . .	27
VII. Synergy . . . . .	41
VIII. Conclusions . . . . .	44
Appendix A. JTF-190 J-2 Billet Structure for Operation UPHOLD DEMOCRACY .	48
Endnotes . . . . .	51
Bibliography . . . . .	58

[A]n officer . . . should possess a standard of judgment. He should be guided by the laws of probability. (Clausewitz 1832, 117)

**I. Introduction.** For forty plus years the United States fought a silent, Cold War against the former Soviet Union and her allies. The paradigms most prominent in the minds of the U.S. military and citizenry were massive retaliative nuclear war, and enormous conventional attritional warfare to be fought on the plains of Germany for the freedom of the Free World. That paradigm is no longer with us. It disappeared with the fall of the former Soviet Union (FSU). Since then, the Defense Department has struggled with justifying the size, means, structure, roles, and missions of the armed forces. It has also gnashed its teeth on the future of warfare, and how it will fight such a war. This uncertainty, of course, has made the justification process all that much more difficult.

Stability and support (peace) operations are on the increase.<sup>1</sup> These missions are not new or unique. The U.S. involvement in stability and support operations has occurred throughout its history. Many stability and support situations occurred during the Cold War that required deployment of U.S. forces. All of these instances, except for Korea and perhaps Vietnam, were primarily low intensity conflicts (LIC). The trend continues today in Bosnia.

Criticism has been leveled at those advocating increased focus on stability and support operations as the future of conflict. The argument goes that maneuver warfare is not dead, and unpreparedness for this type of operation could lead to catastrophic results. Regardless, stability and support operations are not a limited or isolated phenomenon. The short shrift it received, during the height of the Cold War, for doctrine and equipment

support is over. The truth is that a balance is needed. The prudent policy is to develop capabilities, doctrine, and training to prosecute any potential contingency.

The issue remains pertinent that the U.S. Army is still optimized to deal with large-scale maneuver warfare, albeit focused on a short war of annihilation. Threats posed by Third-World insurgent groups are bent on defeating the U.S. through asymmetrical means. The more proficient we become in maneuver warfare, the less other nations and groups are willing to fight us on those terms. They use asymmetrical, nonlinear political, military, economic, and informational techniques to destroy our will to fight.

The best way to fight this type of warfare is to build in the flexibility to succeed along the entire spectrum of conflict. Development of doctrine, tactics, techniques, and procedures, equipment, and training for execution of all contingencies is critical. These developments cannot wait. Time is especially important in stability and support operations.

Time is the bane of all contingency operations. It is compounded multiple times in initial entry operations. The situation is fluid, and the intelligence is sketchy at best. It becomes critical to maximize the interim between identification of a crisis requiring military response and execution of the plan for that response. Within that window, the force must optimize the time available for planning. Forfeiture of time through inaccurate crisis identification and insufficient planning reduces the chances for success.

With the recent return of forward deployed army formations from their Cold War locations to the U.S., more and more planning and execution deals with force projection operations. According to the 1993 version of FM 100-5, "Force projection is the

demonstrated ability to rapidly alert, mobilize, deploy, and operate anywhere in the world. It is the key to power projection."<sup>2</sup> Force projection is unavoidable in today's climate.

While it is true that there is no other superpower that can rival the might of the U.S., the stability that allows us to prosper as a nation is sometimes shaken by smaller, less significant forces. Indeed, some have postulated that it is precisely because of the superior combat resources of countries like the U.S. that revolutionary wars and insurgencies are so prevalent today.<sup>3</sup>

Modern revolutionary conflict is an artifact of imperialism and the industrial age. Democratic ideals and industrialization grew up together. Revolution comes about with the rise of the middle class and the opportunities available and more importantly those denied to the middle class. Increased wealth leads to cries for greater self-governance. Many conflicts outwardly manifest ethnic, cultural, racial, religious, or idealistic causes, where the truth lies with economic causes. Governmental crises seen in a number of third-world nations today are rooted in this democratic ideal.<sup>4</sup>

**National Security Environment:** The legacy left by the demise of the Cold War is one that includes the resurgence of latent ethnic animosities in multi-cultural societies and along cultural fault lines<sup>5</sup>, smoldering civil strife in decadent societies, rising religious fervor and intolerance, environmental disasters, and widespread anger and disaffection among the gifted and ambitious in the Third World due to lack of opportunity.<sup>6</sup> The result of all of this is increased instability. A vast number of the resentments are age-old, but many are being exacerbated by a media that transmits visions of the affluent lifestyle enjoyed by the developed Western nations to the impoverished Third World peoples

throughout the world. The media, although not at fault for the reaction of peoples to their stories, have used modern communications quite effectively to spread the gospel of the good life to those that probably will never enjoy its fruits. Many Third-World nations precipitate a downward spiral by depleting their resources, over-financing their development, and creating animosity among their citizens through wide disparities in wealth and power in an ever-fruitless attempt to catch up to developed countries. In these countries, the viability of the nation-state system becomes doubtful.

Western politicians feel immense pressure to alleviate suffering in less developed regions. The pressure groups are: voters, lobbyists, allies, adversaries, the media, and their own consciences. In the U.S., where the whims of the constituency affect the polls of the elected officials, the media plays a dominant part in influencing the views of American citizens. Pictures of the Four Horsemen of the Apocalypse run amuck bring public cries of intervention to set things right. At the center of this policy is the use of military forces to provide the immediate stability to allow non-governmental organizations (NGOs), private volunteer organizations (PVOs), and other government agencies to relieve the suffering and begin to create the foundation for long-standing stability.

In most cases where the governmental apparatus has broken down or demonstrated an inability to act, one or more illegal government(s) is established by rival faction(s) vying for control of the nation and its future. This poses a special problem for the unilateral or multinational forces sent in to assist. The ability to weed through the conundrum is a critical factor in the ultimate success of the force and ultimately the stability of the state.

Revolutionary war is "the seizure of political power by the use of armed force."<sup>7</sup> However, it requires a popular or broad-based support, long-term armed struggle, and a conscious revolutionary objective. That some revolutions do not seem to have the goal of overthrow of the government does not dissuade the reader from the general message: the widespread disaffection of the populace for the incumbent government. What is desired is change, either of the ruling elite or in the policies of that group.

This monograph looks at the continuum from identification of crises to execution of military operations from the operational perspective to determine if intelligence forecasting is possible. A holistic, systems approach is used to investigate the potential of intelligence preparation of the battlefield combined with the U.S. Southern Command SWORD model to do forecasting. Additional enabling factors, such as the information inputs, organizational framework, personnel selection, and training are evaluated. The evaluation criteria are accuracy, completeness, simplicity, relevance, and timeliness.

Measuring the volatility of a specific internal conflict and predicting its course are of primary importance to the decision-maker and staff planner. Since time is our most perishable commodity, a relatively accurate forecasting model is a prized possession.

A note of caution is in order. First, the model is not intended to be prescriptive. It might seem so at the outset; however, nothing is perfect. According to Chuyev and Mikhaylev, two prominent Soviet military theorists, "Every situation is, to a greater or lesser extent, uncertain. We can never know in advance the precise quantitative and qualitative characteristics of a certain event at a specific moment of time in the future."<sup>8</sup> The vagaries of the human conflict are such that forecasting is difficult at best. The intent

is to give indications and warning (I&W) of possible crises area(s), and forecast their path with a modicum of success. Second, cultural characteristics specific to a nation-state preclude the overarching endorsement as a forecasting tool. No pre-revolutionary conflict or insurgency ever develops exactly the same way.

The criteria for evaluating our model and its supporting components are: accuracy, completeness, simplicity, and rapidity. These are the criterion that determine a good model.<sup>9</sup>

## **II. Terms, Definitions, and Variables:**

**Forecasting:** A research process, as a result of which the forecaster obtains probability data about the future state of the object being forecast.<sup>10</sup>

**Insurgency:** A protracted political-military activity directed toward completely or partially controlling the resources of a country through the use of irregular military forces and illegal political organizations.<sup>11</sup>

**Intelligence:** "The product resulting from the collection, processing, integration, analysis, evaluation, and interpretation of available information concerning foreign countries or areas."<sup>12</sup>

**Predictions:** The art of judging the future state of an object, based on the subjective "weighing" of a large number of qualitative and quantitative factors.<sup>13</sup>

**III. Forecasting:** One of the biggest criticisms leveled at intelligence systems is that they cannot forecast with any measure of effectiveness the future state of any situation. Some have taken this as a justification to deny any forecasting model whatsoever. This is convenient for those using this approach. But it defeats a third of the intelligence

paradigm: tell the decision-maker what is possible for the enemy, put the events of the present into context, and tell the decision-maker the threat's most probable course of action.<sup>14</sup>

There are many models extant for evaluating and describing intra-state conflicts. Few, if any, claim to forecast the future. They cite the large number of independent variables impacting on the environment. These variables complicate the ability to identify which internal troubles will eventually erupt into revolutionary conflicts.<sup>15</sup> Others might say that no insurgency is the same, therefore prediction in one case is a mute point. While it is true that no society is in perfect balance or devoid of problems, and that each conflict is unique, the model presented in the previous section makes a case for the underlying threads that are endemic to all revolutionary conflicts to one degree or another.

It is true that predicting or even forecasting to any degree of accuracy is extremely difficult to do. If it were not, the need for quality intelligence analysts would not be so great. What makes forecasting hard in intra- and inter-state war is that conflict between factions, nations, or groups is nonlinear. Changes in variables do not always show a corresponding change in outputs. A direct link between cause and effect is fuzzy at best, and sometimes non-existent. The excessive number of variables reduces the ability of the analyst to come to grips with a simple, linear equation for determining the root causes and directions of the conflict. A new paradigm is required to deal with the dynamic complexity inherent in most real world problems, such as revolutionary warfare. The analyst cannot reduce his work to a formula or set of rules to determine the path a nation will take with regard to revolution.<sup>16</sup>

Conflicts clearly lack proportionality and additivity, and are thus nonlinear.

Proportionality means that small inputs to the system equate to small outputs. Additivity connotes that the sum of the parts is equal to the whole. Clausewitz understood this. In his voluminous tome *On War*, he alludes to the unpredictability of war. Chance, fog, friction, and complexity obscure the observer's vision and perception of the situation. Complexity and unpredictability in military operations provide no readily apparent way to break warfare down into elementary chunks for easy analysis and understanding.<sup>17</sup>

Viewed in terms of a complex adaptive system, conflict involves a great many independent agents interacting in near infinite combinations. Second, the interactions among the variables allow the system to spontaneously self-organize. Third, the adversaries adapt to the environment and the threats they perceive. Lastly, the players are dynamic in the sense that they interact with the environment and each other in spontaneous ways.<sup>18</sup> Each of the opponents in a conflict is oriented on their desired objective.<sup>19</sup> The final outcome could determine the continued existence of the state or group involved. Prediction and feedback are essential to the survival of the complex adaptive system.

Adaptive agents constantly try to anticipate the environment around them. They try to predict the future. They accomplish this by building models of their environment. To determine the efficacy of their model, the agent uses feedback. Where discrepancies between their model and the world around them exist, they modify the model. It is the key to survival, whether in war, business, politics, or any other complex adaptive system.<sup>20</sup>

Many factors impair the ability to predict the next step the enemy will make. First, there is the enemy himself. He rarely cooperates with the friendly force commander in achieving his desired outcome. Just as American forces have a tendency to deviate from prescribed doctrine, including tactics, techniques, and procedures, the enemy will use METT-T as well as his experiences to operate on the battlefield in the manner he deems best. Second, friction will beset the enemy just as it will friendly forces. This means the enemy will not always operate as desired. Fatigue, misunderstandings, battlefield mistakes, and any other thing that can cause mayhem with the operation reduces the synchronization and effectiveness the operation. Third, fog will pervade the battlefield. This is not fog in the literal sense, but those factors that cloud the commander's ability to gain perfect situational awareness. Regardless of the number of intelligence systems deployed and focused on the enemy, the commander will never truly know everything that he would like. More importantly, because of the human nature of warfare, the threat commander will remain more or less enigmatic and unpredictable. Finally, chance plays a tremendous part in any operation. The probability of any of a number of variables occurring a certain way changes with every moment.

To abstract from this phenomenon some more limited and technical, more intellectual and less emotional, "strategy" of "revolutionary war" may be to miss the most important point of the subject--the specific social, political, and psychological conditions that make a revolution possible. Without those conditions, strategic technique is meaningless; and any strategy of revolution that does not reflect and exploit them as they exist, in a specific time and place, will almost certainly fail. (John Shy and Thomas W. Collier 1986, 819)

**IV. Model for Forecasting Insurgency Conflict:** To abstract a general model for explaining and forecasting the outcome of rebellions worldwide, from the extant theories

of revolutionary conflict, is a tall order. The variables are numerous and varied. There are constraining and restraining variables on each player in any conflict. Some of the constraining and restraining variables are: means and time available, will, and domestic and foreign support. Forecasting future events seems improbable. The realm of possibilities open to an adversary appears endless. He too is constrained by his environment. The range of options available is limited by all the limitations that impact on incumbent government forces. An insurgent must take certain steps to win over the populace and the armed forces, while dissuading intervention from outside powers.

Revolutionary conflicts do not use war as a means to a political end, they are the political end. The mere fact that a group or faction cannot obtain their goals any other way than through violence, drives the insurgents to adopt violence as their policy. Revolutionaries usually must resort to indirect means (moral power) to reach their goals. Directly facing off against government forces can be suicidal. The insurgents are forced to rely on asymmetrical attacks to achieve their goals.<sup>21</sup>

In essence, revolutionary war is total war. The very survival of the incumbent state apparatus, or the rebellion, forces the actors toward the use of all means to their end. The goal of the state is to destroy the cancerous insurgency before it grows too popular and co-opts the populace away from them. The revolutionaries, on the other hand, want to break the bonds between the government and the people, or the armed force and the people. Regardless, the goal is to reduce the legitimacy of the government and thereby increase their legitimacy.<sup>22</sup> See Figure 1 for a depiction of the above.

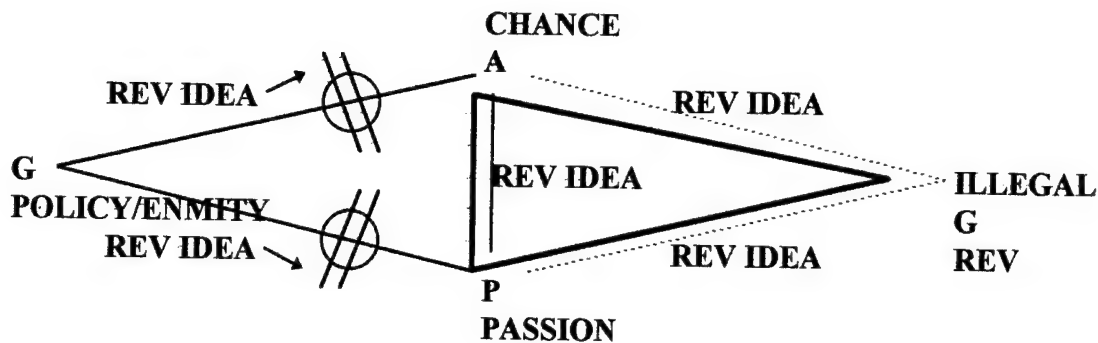


FIGURE 1: The Clausewitzian Trinity for Revolutionary Conflict.

One of the key lessons learned from observing totalitarian nations is that liberalization only occurs from the top down, and when the leadership wants it to.<sup>23</sup> Control of the media and elimination of the revolutionary leadership cuts the revolution off from the people, and allows it to wither on the vine. Indeed, in democracies, the problems are at the same time more demanding and easier to deal with. The legitimacy of the government is always openly in question. Journalists and intellectuals alike are critical of decisions made by the government regarding all forms of policy, especially those limiting freedom of speech. Any perceived degradation in freedom or effectiveness of the government to meet the needs of the people reduces the legitimacy of the government to rule. On the other hand, the mere fact that democracy prevails means that the people have control of their own destiny. This freedom reduces the chance that the government will turn over in a violent manner. The people will oust the government through the vote.<sup>24</sup>

Most insurgent groups have similar objectives designed to rest control of a country. These objectives include: (1) limit the government's ability to provide basic public services, while enhancing their capability to provide these services; (2) get the tacit

support of key portions of the population; (3) isolate the government from international diplomatic and material support, while increasing the same support for the insurgents; (4) increase legitimacy both at home and abroad at the expense of the incumbent government; (5) erode the government's confidence, effecting abdication and withdrawal of key leaders and cadres; and (6) negate the government's power to employ coercive means, while increasing the insurgent's ability to do the same.<sup>25</sup>

Insurgencies that succeed exhibit similar stages of development. These stages are: pre-insurgency, organizational, guerrilla warfare, and mobile conventional warfare. During the pre-insurgency stage, the insurgent leadership forms due to some grievance, either domestically or foreign-based. The government shows little signs of responding to this blooming insurgency. It has not reached the stage that it has any meaningful impact on the nation. In the organizational stage, the insurgents recruit and train future soldiers for the cause, acquire supplies, and garner international and domestic support. In this way the infrastructure is built for total war. Increasing activity by the insurgents force the legal government to establish a counterinsurgency structure. The guerrilla warfare stage is marked by hit-and-run tactics against government targets, widespread political activity to reduce the legitimacy of the government and increase their own. Government measures include political, social, and economic reforms, civic action programs, psychological operations, and amnesty programs to negate and regain insurgent political gains, and low-level military action to eliminate the guerrillas. The final stage, mobile conventional warfare, sees the use of large-scale military operations in the conventional warfare mode. The government responds in kind and fights it out with the insurgents. This last stage is

rarely reached. Insurgency is usually a long term thing. However, the amount of time spent in any one stage varies, as does the total time from start to finish.<sup>26</sup>

Theory explains the way things work. It is based on experimental and empirical data.<sup>27</sup> The theory described above clarifies revolutionary conflict. The SWORD model is a blueprint based on the theory. It was used as the basis for forecasting, because it was accurate in its ability to explain insurgencies; i.e. it was statistically significant. A model that can accurately explain reality has the capability to forecast. The ability to forecast is discussed below. The use of the SWORD model to forecast is addressed in the synergy portion of this monograph.

The model that best fits the needs for forecasting insurgencies and their direction is the U.S. Southern Command's Small Wars Operational Research Directorate (SWORD) model because of its ability to explain insurgencies at a 88.37 percent ( $R^2 = .90$ ) accuracy.<sup>28</sup> The remaining readings (10 percent), although inaccurate, were easily explained by intervening factors that were not predictable, but which changed the course of the revolution for better or worse.<sup>29</sup>

Dr. Max G. Manwaring, a retired U.S. Army colonel, former Chief of Staff for U.S. Southern Command, and current instructor at the U.S. Army War College, and Dr. John T. Fishel, a retired U.S. Army lieutenant colonel, former J-5 staff member, U.S. Southern Command, and present instructor at the U.S. Command and General Staff College, evaluated the model on seven dimensions, each with numerous attendant variables, all interacting dynamically. The seven dimensions are: host government military actions, host government legitimacy, military actions of the intervening Western power,

supporting actions of the intervening Western power, actions against subversion, unity of effort, and external support to insurgents. Only four of the dimensions proved significant by themselves: host government legitimacy, military actions of the intervening Western power, supporting actions of the intervening Western power, and external support to insurgents. Although the other three dimensions did not prove significant by themselves, the model was not viable without these three dimensions.<sup>30</sup> This is evidence of its inherent nonlinearity. The indirect and non-proportional effects resulting from the various inputs on the system, indicate its nonlinearity.

Since there are four actors in the model - the host government, the insurgent organization, the intervening power supporting the host government, and/or the intervening power supporting the insurgents - each dimension corresponds to a separate 'war.' The "host government military actions" works on the "guerrilla war." "Acts versus subversion" evaluates the "war against subversion (leadership/infrastructure)." "Unity of effort" impacts on the "war to unify the counter-insurgency effort." "Military acts of the intervening power" measures the "twilight war." "Supporting acts of the intervening power" and "host government legitimacy" look at "the legitimacy war." The "external support of insurgents" key in on the "war to reduce aid to insurgents." Finally, the "host government military actions" and "military acts of the intervening power" work on the "possible war against intervening conventional forces." The complexity of the interaction between the actors, and the multifarious sub-conflicts give rise to the separate 'wars.'<sup>31</sup>

Manwaring and Fishel provide two tables<sup>32</sup> that determine the direction and success of the counter-insurgency. On the top row they list the dimension, and below each dimension the attendant variables.

MILITARY ACTIONS OF INTERVENING POWER	SUPPORT ACTIONS OF INTERVENING POWER	HOST GOVERNMENT LEGITIMACY	DEGREE OF OUTSIDE SUPPORT TO INSURGENTS
NUMBER OF TROOPS	MILITARY SUPPORT CONSISTENT	DEGREE OF DOMESTIC SUPPORT	SANCTUARY AVAILABLE?
TYPES OF ACTION	PERCEIVED STRENGTH COMMITMENT	HOST GOVT PERCEIVED AS CORRUPT	INSURGENTS ISOLATED FROM SOURCES OF SUPPORT
PRIMARY OPERATIONAL OBJECTIVES	PERCEIVED LENGTH OF COMMITMENT	GOVT'S ABILITY TO MOTIVATE PEOPLE	STAGE OF WAR DURING WHICH SANCTUARY AVAILABLE TO INSURGENTS
UNCONVENTIONAL OPERATIONS		POLITICAL VIOLENCE CONSIDERED COMMON?	

TABLE 1: Most Important Variable by Long-Term Dimensions

ACTIONS VS SUBVERSION	HOST GOVT MILITARY ACTION	UNITY OF EFFORT
POP CONTROLS	DISCIPLINE/ TNG REG TROOPS	PERCEPTION OF IP INTERESTS
PSYOPS	DISCIPLINE/ TNG PARA-MIL	CLARITY OF TERMS FOR SETTLEMENT
INTEL OPS	WILLINGNESS TO TAKE OFFICER CASUALTIES	IP USE OF PUBLIC DIPLOMACY
	AGGRESSIVE PATROLLING	IP-HG POLITICAL POLARITY (SIMILARITY OF POL OBJECTIVES)

TABLE 2: Most Important Variables by Short-Term Dimensions

Manwaring and Fishel posit several principles, based on their findings. First, overwhelming force, if applied, is necessary from the outset. Piecemeal employment of military forces does not solve the problem.<sup>33</sup> Haiti provides a stark example of this. In that operation, it was noted that the sudden arrival of overwhelming combat power dissuaded the criminals from acts of violence against U.S. military.<sup>34</sup> However, indigenous forces are the best solution to the problem. The U.S. is best served by training the internal security force to act on its own to solve domestic insurgencies.

Second, the most effective support is that which is given in a consistent manner. Inconsistencies in political, military, or economic support drastically reduce the probabilities of success in arresting an insurgency.

Third, legitimacy is the linchpin in any internal conflict. The insurgent will attack the legitimacy of the incumbent government at every turn in order to sway the populace to their cause. Manwaring and Fishel caution the reader, though, saying that the host

government and its relationship with the intervening power is the strongest dimension.

Positive efforts by the intervening power to support the host government

counterinsurgency program will help strengthen their legitimacy. Failure to do so will surely result in the collapse of the incumbent government's counterinsurgency.

Fourth, revolutionaries must be separated from their sanctuaries and other sources of support. Failure to do this extends the conflict by allowing the insurgents the opportunity to recover, reorganize, and reconstitute without fear of reprisal from host nation forces. The insurgents were able to employ the protracted war concept.

Fifth, intelligence and psychological operations, and population controls need to identify and isolate the insurgents from the general population so that security forces can eliminate the problem without it spreading too much farther.

Sixth, the internal security force of the host nation must be reliable, professional, motivated, quick to react, and decisive to retain the political and military high ground. Lastly, the incumbent government must establish, resource, and empower a highly effective command and control organization to plan and execute all facets (diplomatic, economic, sociological, psychological, and military) of the conflict toward the political end.<sup>35</sup>

**Determining the Continued Viability of the Insurgency:** The use of proper indicators to alert, then focus intelligence effort is critical. Two sets of indicators are used to accomplish these tasks. The first set of indicators is intended to alert intelligence agencies/organizations on the criticality and the course of the problem. The second sets in motion the model to predict the outcome of the insurgency.

Using Crane Brinton's five stage model of revolutionary conflict, from his classic *The Anatomy of Revolution*, the observer can track the progress of the struggle. The five stages of revolutionary conflict are prodromal, fever, remission, crisis (Thermidoran), and recovery.<sup>36</sup> The indicators for each stage are provided below.

The prodromal stage provides indications that the impending revolution is on its way. It is essential to understand that conflict is endemic to all societies, and that in healthy societies the level of conflict is not excessive or overly hostile to the government. The measure of this tension is a qualitative call based on the society under review. Some symptoms that appear in many, if not all intra-state conflicts, include improving economic conditions; class antagonism, specifically between the middle and ruling classes; a transfer of allegiance of the intellectuals; an ineffectual and inefficient government (many of the programs instituted to assist the populace are only partially implemented, and the military and police forces are not doing their job well), and many in the ruling elite lose faith that they have the right to rule (some may even go over to the other side). The ability to accurately forecast which states are ripe for revolution is critical in this pre-revolutionary stage.

The revolution occurs in the fever stage. In this episode, the widespread dissension seen in the prodromal stage continues. The crescendo of violence produces dramatic events (bombings, assassinations, violent riots, and/or other stands against the government) that signal the start of a revolution. The momentum of revolution snowballs as the people find a vent for their pent up frustrations over unanswered grievances. It is interesting to note that the agitators usually cannot tell whether the event has crossed the

threshold into a revolutionary movement supported by the people, or is simply an individual occurrence unconnected to a people's desire for revolution.<sup>37</sup>

Remission occurs after the government is toppled. The moderates seize control of the government and begin to run things. They generally fail to maintain control. Many reasons prevail for the failure of the moderate government. First, the illegal government set up by a coalition between the moderates and the radicals continues to operate with the radicals taking sole reign. Second, the moderates are viewed as the new incumbent government and are expected to solve many of the long-standing issues that the previous government could not. This is practically impossible with the radicals railing against them at every turn. Third, many of the moderates do not know how to run a government and are even more ineffectual and inefficient than the previous government was. They refuse to use competent officials of the previous government, because it would be viewed as collaboration with the tyrants of the past. Fourth, due to this incompetence, the people turn against this government and more and more towards the radical cause which promises to solve all of their problems (usually through a form of Marxist paradise). And lastly, as the new incumbent government the moderates try to maintain the basic freedoms they demanded during the revolution, specifically freedom of speech. Without upholding these ideals, the new government would not be considered legitimate by the masses. This legitimacy provides a mandate from the people to allow the new government to continue. On the other hand, the radical illegal government has none of the ideological pretenses required of the legitimate government. They do not have to uphold the democratic ideal

of freedom of speech, among others. Their way is the ends justify the means to a purer, more perfect form of government.

Crisis comes when the radicals take over, usually rather easily, from the moderates. The radicals purge and eradicate the moderate elements from the government as well as all other opposition parties vying for control. The reign of terror occurs during this period and, depending on the situation, may or may not be overly long and bloody. The extremists try to run the government according to the idealistic precepts with which they initiated the revolution. Dispensing with a few human and civil rights and freedoms is justified for the security of the cause for which they fight. Any other opinion is seen as counter-revolutionary. The hearts and minds of the populace are at stake and nothing can come in the way of the truth as perceived by the radicals.

The Thermidoran, or recovery stage, sees the nation grow weary of violence and turns back to a more moderate position. Usually the radicals are expunged. The removal of these radicals returns the nation to normalcy.

The internal nonlinearity of the Manwaring/Fishel approach forces us to look at the seven dimensions simultaneously. To do this, each dimension has to be evaluated as well before the overall evaluation. The simplest methodology to use is a yes/no matrix for each variable in the dimension. All "yes" answers indicate that the dimension strongly supports the host government. Any "no" response enfeebles the dimension. The following matrix is an appropriate example:

### ACTIONS VS. SUBVERSION

	POP. CONTROLS EARLY	PSYOPS EARLY	INTEL OPS EARLY
YES			
NO			

The degree of success in each of these dimensions by the host and/or intervening powers spells the success of each of the corresponding wars, and therefore the counter-insurgency as a whole. Once the dimensions are evaluated individually, they are put together and tested as a whole. The overall score of the model allows to evaluate how the counter-insurgency effort is proceeding.

	MILITARY ACTIONS OF INTERVENING POWER	SUPPORT ACTIONS OF INTERVENING POWER	HOST GOVERNMENT LEGITIMACY	DEGREE OF OUTSIDE SUPPORT TO INSURGENTS
YES				
NO				

### LONG TERM VARIABLES

	ACTIONS VS SUBVERSION	HOST GOVT MILITARY ACTIONS	UNITY OF EFFORT
YES			
NO			

The primary difference between IPB for conventional and for operations other than war is focus - the degree of detail - and the enormous demand for demographic analysis required to support the commander's decision process. An accurate IPB provides focus. (Center for Army Lessons Learned 1993, I-17)

**V. Intelligence Processing and Analysis:** The U.S. Army is the proponent for ground intelligence doctrine.<sup>38</sup> Its touchstone document is FM 34-1 (*Intelligence and Electronic Warfare Operations*). The intelligence analysis system for planning and execution

purposes is IPB. IPB provides a baseline “systematic, continuous process of analyzing the threat and environment in a specific geographic area.”<sup>39</sup> Along with a litany of other doctrinal manuals, FM 34-2 (*Intelligence Collection Management and Synchronization*), FM 34-2-1 (*Reconnaissance and Surveillance Planning*), FM 34-3 (*Intelligence Analysis*), and FM 34-7 (*Intelligence and Electronic Warfare Support to Low Intensity Conflict Operations*), IPB rounds out the methodology for dealing with terrestrial intelligence needs in insurgency conflicts.

IPB is essentially a process for understanding the environment as a whole using the information available. This is accomplished through an iterative, inductive process which builds to the whole by putting together and analyzing the pieces of the battlefield: threat, terrain, and weather. The components to each of these pieces vary with the mission, region, enemy, and friendly forces available.

IPB doctrine for insurgencies and counterinsurgencies focus on specific aspects of the host government and the insurgents, but not on the intervening power. In the first step of the IPB process (define the battlefield environment), FM 34-130 invites the analyst to consider strategic location, and types of relevant activity. Included in the evaluation of strategic location are neighboring countries, boundaries, frontiers, coastal waterways, and possible third-country support for the insurgents. The type of relevant activity covers an analysis of host nation populace, government, military, demographics, political structure, economics, foreign policy and relations, policies on the use of the military, and the threat. The second step of IPB (describe the battlefield effects) looks at the terrain, weather, migratory and settlement patterns, politics, and the impact of economics on the indigenous

population and the insurgents. Step three (evaluate the threat) hones in on personalities and their patterns, insurgent weapons, unit organization, movement patterns, and the location of the insurgent's home and employment. The last step in IPB (determine threat courses of action) puts the analysis together to determine the most likely and most dangerous threat courses of action. Among the areas covered by this last step are templating insurgent activities on/near/away from their objective, and insurgent support (logistics and communications) functions.<sup>40</sup>

IPB intimates the ability to predict. However, it cannot accomplish this task without the model to understand the unique characteristics of the mode of warfare, and the cultural, religious, ethnic, racial, and ideological base of the threat and host populace involved. The battlefield framework established through the IPB process is adaptable. IPB is a continuous process. But it is only a process, not a framework or model. What is missing from the IPB process is the model to conduct the analysis. To truly forecast, analysis has to incorporate the nonlinear aspect of warfare into the methodology, and provide a framework or model to guide the results. At best, IPB is a good explanatory tool to tell what is happening and why it is so. It provides a means to understand the current environment; therefore it may offer a glimpse to the future. This is not forecasting. The requirement to properly forecast is a methodology and a model. IPB has the first of these requirements, but not the last. IPB provides the methodology, but not the model.

A second criticism with IPB is that it is inherently a linear approach to solving a nonlinear problem. As stated earlier, IPB breaks the whole environment (threat, terrain,

and weather) into component parts and analyzes them in a proportional and additive way. Major errors in the estimate of threat intentions and capabilities can accrue from this simplistic approach to analysis. What is stressed are the more tangible inputs to the process; i.e. weather forecasts and impacts, terrain impacts, and enemy doctrine and weapons capabilities. What takes the linear IPB system nonlinear realm is the inclusion and analysis of the critical imponderables and infinitely variable factors, such as morale, will, level of training, legitimacy, and leadership. Finding a way to include these imponderables in a measurable and meaningful way is no easy task. It takes a keen sense of the battlefield and insight into the enemy's thought processes, plans, and procedures.

All conflicts are driven by their own specific context. Politics, economics, sociology, psychology, ethnic, regional, religious, or racial groupings all bear on the matter. Clausewitz states that "the same political object can elicit *differing* reactions from different peoples, and even the same peoples at different times."<sup>41</sup> The ability to account for this infinite variability is especially important in counter-insurgent operations.

Lessons learned from Somalia were that, "IPB takes on increased importance in a power projection Army."<sup>42</sup> Developing the situation quickly and correctly are paramount. This is especially true in under-developed regions of the world, where intelligence collection and analysis have not been thoroughly established.

There are three levels of intelligence support-- strategic, operational, and tactical. Strategic intelligence is required for the formulation of strategy, policy, and military plans and operations at national and theater levels. Operational intelligence is required for planning and conducting campaigns and major operations to accomplish strategic

objectives within theaters or areas of operations. Tactical intelligence is required for planning and conducting tactical operations.<sup>43</sup>

**Strategic and Operational IPB:** IPB differs little at each level of war. Each echelon uses the four step process. The key difference is in the scope of the area of interest (AI) and the information requirements for these AIs.<sup>44</sup>

MG S.L. Arnold, Commanding General and MAJ David T. Stahl, G3 Planner of the 10th Mountain Division, noted that, "Operational commanders need a clear mission statement for the operation; the desired end state, conditions, and measures of effectiveness; strategic-level intelligence preparation of the battlefield, and applicable planning constraints, including troops available."<sup>45</sup> Regarding strategic and operational IPB, the Center for Army Lessons Learned (CALL) found the IPB doctrine wanting with respect to the Operation RESTORE HOPE in Somalia. They suggested a different paradigm for the IPB process that takes into consideration the particular nature of stability operations. Many of these suggestions showed up in the 1994 version of FM 34-130.

During the Define the Battlefield phase intensive understanding of demographic data, sub-national politics (regional, local, as well as clan/tribe and illegal governments), culture, religious affiliations, infrastructure, ethnicity, languages, key terrain features (water points, meeting/ gathering places, health care facilities, and worship/holy sites), loyalties and hatreds must be understood for IPB to be practicable.<sup>46</sup>

In the Describe the Battlefield phase, the area of operations (AO) must be evaluated not only in terms of the standard observation and fields of fire, cover and concealment, obstacles, key terrain, and avenues of approach and mobility corridor

standards, but the planner must take into consideration demographic and clan boundaries, alternate and traditional transit routes, and health risks.<sup>47</sup> The better the understanding of the terrain and environmental factors that impact on a mission, the fewer potential mishaps are probable.

Describing the Threat offers still more challenges in the force projection, and stability operations. Important factors in determining these challenges is the permissiveness of the environment, opposition from the indigenous public to U.S. intervention and their will to act on that opposition, dissident groups, leader profiles and their psychological make-up, threat modus operandi and tactics, and other nonconventional personnel (NGO, PVO, private security forces, engineers, Third-World nationals, local police, and mercenary forces).<sup>48</sup> Some key questions that require answers are: areas of insurgent concentrations, bases, logistics sites, resupply routes, safehouses, weapons cache sites, potential targets, and, the insurgent's strategy to overthrow the legitimate government.<sup>49</sup>

The final stage requires Threat Integration to pull all of the pieces together. The analyst must also understand that the threat is both civil and military.<sup>50</sup> As stated earlier, IPB is a linear process. To deal with nonlinear situations, the analyst must add the art to the science. During stability operations, the art must include the integration of behavior patterns as well as situational event analyses.<sup>51</sup>

According to Dr. James J. Schneider, a professor at the U.S. Army School of Advanced Military Studies, center of gravity "may be the key design concept at all levels of military art. Thus the first step in the design of any campaign or major operational plan

is to identify the enemy's center of gravity - his main effort."<sup>52</sup> Correct identification of the insurgent center of gravity is critical to the success of the operation. Indeed, improper identification of centers of gravity at the strategic level can lead to failure, regardless of tactical successes.<sup>53</sup> Manwaring and Fishel declare legitimacy is the center of gravity in revolutionary conflicts.<sup>54</sup> The fight is over the future vision of the state. The decisive points provide leverage to access and defeat the center of gravity.

A decisive point is any objective affords a marked advantage over the enemy. Decisive points force the commander to make a decision. First, he must decide whether to attack the point. Second, if he attacks the point, how many resources is he willing to expend to achieve the objective. Decisive points which the commander decides to retain or seize are called objective points.<sup>55</sup>

There are three types of decisive points: physical, cybernetic, and moral. Physical decisive points include tangible objects such as terrain features. Cybernetic decisive points involve those things that sustain C3 and the processing of information. And moral decisive points are those that sustain the forces' morale and will to resist.<sup>56</sup>

While intelligence has traditionally tended to focus on the enemy, the definition of who or what the enemy is in a peace operation is not always clear....In future operations, however, commanders may want to gear their intelligence and other information collection systems--including the front-line soldier--to collect as well on those indicators signaling the direction in which the operation is heading. (Allard 1995, 76)

**VI. PRACTICAL CONSIDERATIONS:** Aside from the theoretical and doctrinal methods and issues opined above, some extant practical issues are important for the realization of accurate forecasting at the operational level. These issues enable the science of forecasting. Essentially, these issues involve the quality of information inputs, the

architecture and efficacy of information flows within the forecasting organization, and the selection and training of personnel and organizations. These considerations are what enable the model and the methodology to work.

The quality of the information inputs to the model are critical to forecasting. Without accurate, reliable, and valid information, the model's output is in doubt.

FM 34-7 states that, "US forces require intelligence information to operate either in support of a US-backed insurgency against an oppressive regime or on behalf of a friendly HN fighting an insurgent group."<sup>57</sup> The processing and analysis functions of the intelligence cycle, as represented by the model and analysis sections, are only possible because of the input to the system. Gathering the right information to conduct analysis is critical to putting the pieces together. But first, the organization must know what it needs to know, know what it does know, and know what it does not know. From here the commander, along with his senior intelligence officer can ask the right questions.

The commander directs the intelligence effort in his unit. The driver for information inputs are the commander's critical information requirements. It is through this venue that the commander enunciates his information needs.<sup>58</sup>

The commander's guidance and direction, estimate of the situation, and objectives drive the intelligence requirements. The requirements, in turn, drive the intelligence system components, organization, services, and products. Requirement satisfaction depends on the ability to work these various pieces of the system to that end.<sup>59</sup>

The senior intelligence officer (SIO) must thoroughly understand the commander's intelligence requirements. If he does not, the SIO must make an effort to clarify the

requirements with the commander's. Conflict resolution discrepancies between the commander's requirements and intelligence capabilities are resolved by the SIO.<sup>60</sup>

Requirements development is an art. They differ considerably depending on the phase the unit is in. For example, the majority of the peacetime requirements for a field commander are of the indications and warning (I&W) and order of battle (OB) types. A more difficult, but critical undertaking, is anticipating needs for a crisis or conflict.

Information requirements will vary considerably as a unit transitions from garrison to conflict.<sup>61</sup>

Specificity and phrasing of requirements presents a connotation to those who must act on them. The asset manager's understanding of the intelligence requirement determine the asset, specific order or request tasked to the asset, and timeliness and validity of the collected information. Second, timeliness must be considered. A requirement for a quick turn-around intelligence product will limit the resources available for tasking. Third, the requirement should be tied to the plan/order. Extraneous information desires that have little to do with the success of the mission, or follow-on operations will tie up valuable collection platforms, and communications band-width and/or physical space.<sup>62</sup>

Much of the data required to fill the needs of the intelligence staff does not reside within the command, but must be pulled down from the national intelligence community. Sources include national technical means, agent nets, country teams, and mobile training teams, among others. The command must identify its intelligence requirements in sufficient detail and with enough focus so as not to overwhelm the system and ensure the requirements are met in a timely fashion.

One of the criticisms of the Somalia operation (RESTORE HOPE) was the lack of notification the 10th Mountain Division received prior to deployment. According to Arnold and Stahl, "By the time the [10th Mountain Division] was alerted on 30 November for possible deployment to Somalia, strategic analysis for the operation had been in progress for some time. Had strategic planning been conducted as parallel planning, the joint force commander and his Army component commander would have had opportunities to influence task organizations, mission statements, intelligence requirements, and end state requirements."<sup>63</sup>

Intelligence requirements are critical to the success of any operation. More importantly still, is knowing the right question to ask. It is often assumed that the requirements are in the pipeline, or that the statement of priority intelligence requirements (PIR) and the less important intelligence requirements (IR) are sufficient to get the information and/or intelligence needed to answer the mail to the intelligence sections in the unit. The answer could not be further from the truth. Requests for information (RFI), imagery requests, and signals intelligence (SIGINT) amplifications (AMP) are some of the means to insert specific queries into the intelligence community for focusing collection and reporting.

The information requirements during a contingency operation are not those typically asked for in conventional missions. Other information required during an operational commander's preparation of the battlefield for stability and support operations includes, but are not limited to, non-traditional categories. Some of this information includes: continuous, near real-time information on diplomatic and political aspects of the

proposed operation; identification, location, and intent of local military organizations, militias, guerrilla bands, and irregular armed groups; and intent of the population regarding the proposed intervention, whether known or assumed for planning. The status of current or proposed coalition operations and forces impacts directly on the planning and execution of an operation. Detailed information of the type found in the State Department country handbooks on terrain, weather, disease and other aspects of the country is especially handy. Finally, the commander needs to know the identity, location, and intent of non-governmental organizations (NGO), and number, location, and intent of refugees inside and outside the country .<sup>64</sup>

Intelligence requirements are never exactly the same for any two operations, but will vary as a result of tactical situation and the type of mission. Nevertheless, as a jumping off point, the Army has attempted to modify existing requirements to the low intensity conflict paradigm. The difficulties in this are sometimes insurmountable, and it is better to start with a clean slate.<sup>65</sup>

After the requirement is fleshed out, the collection manager must determine the appropriate source for satisfying it. Sensor selection involves consideration of target size, location, sensor platform vulnerability, sensor system capability, and the time required to task or request tasking.<sup>66</sup>

A major problem with the U.S. intelligence system from national down to the tactical level is the overwhelming reliance on technical means to answer requirements. It is well known that technical capabilities are vulnerable to deception. Besides, they cannot provide intent. Human intelligence (HUMINT), however, can corroborate technical

intelligence findings as well as give clues to enemy intentions. At odds with the positive sides of HUMINT is its slowness to respond. Given a requirement, an agent will require sufficient time to discover the information, write up the findings, and submit the report. HUMINT sources are much slower than technical means. Another deficiency is the dangers involved. At the tactical level, CI agents are often in the sanctuary of the unit and no more exposed than the combat arms soldiers. At national level, case officers and their sources are often alone in a forbidding land, where compromise may mean death.<sup>67</sup>

Collection assets that feed the organizations, division and up, with information are multi-disciplined and varied. Among the most profitable disciplines is HUMINT. It is often hailed as the most effective and accurate source intelligence on the LIC battlefield. The adversary(s) does not generally have large formations and unique equipment not found in the general population. There is no easily collectable signatures for SIGINT and imagery intelligence (IMINT) platforms. Since the insurgents, terrorists, outlaws, or rebels act in small groups or cells, and blend into the general populace when not conducting operations, HUMINT is the preferred source to identify and track them.<sup>68</sup>

Excellent sources of intelligence are the indigenous populace, members of the intervening power, NGOs, private volunteer organizations (PVO), and host government agents. Civilian sources can provide data regarding insurgent ideological motivations, logistical support, targets and objectives, tactics, techniques, supporters, organization, weaknesses and vulnerabilities, psychological operations, key members, and locations, size and strength.<sup>69</sup>

Good rapport with the host nation constabulary or internal security force, at least in the initial stages of an insurgency, is critical since most insurgency operations are latent in the criminal reports. As the insurgency grows, the insurgent activities become even more manifest as they are. The host government apparatus, however, may dissolve or at least decrease in efficacy as the power of the insurgency grows. Reliance for HUMINT at this point must come exclusively from the intervening power.<sup>70</sup>

Psychological operations (PSYOPS), Civil Affairs (CA), military police (MP), and counterintelligence (CI) agents, in particular, are good collectors of HUMINT information. Support in the form of counterintelligence agents operating with infantry forces on patrols and checkpoints provide excellent intelligence support to the supported unit and higher headquarters.<sup>71</sup> The sources are virtually endless in the HUMINT-rich environment of counter-insurgent operations.

CI is a discipline that is separate and distinct from foreign intelligence and supports military commanders, operational planners, and the traditional intelligence disciplines.<sup>72</sup> During counterinsurgency efforts, CI targets host nation, insurgent, criminal, and third-party nation's intelligence services infrastructure and intelligence collection capability. The information garnered is used for force protection and other security missions. It is also given to the positive intelligence staff for their use.<sup>73</sup>

SIGINT targets of interest in counterinsurgency efforts are predominantly low level voice, and telephone (cellular and wire) communications. During the pre-deployment phase, national collection is used to build databases. After deployment, national, theater, and tactical SIGINT collectors are employed to develop the situation.

IMINT support to counterinsurgency efforts target storage facilities, transshipment points, known supply routes, recurrent roadblocks, and base camps. In the pre-deployment stage, imagery support focuses on indications and warning (I&W), IPB, and target development. Target folders are developed using the imagery provided. Post-deployment national, theater, and tactical IMINT platforms, to include unmanned aerial vehicles provide imagery support to the commander.

Although some authors harbor a negative opinion of the value of TECHINT (SIGINT, MASINT, and IMINT) in a LIC environment, they agree with the value of HUMINT.<sup>74</sup> HUMINT does predominate in counterinsurgent operations. The more technical disciplines, SIGINT and IMINT, do have their place. It is the interaction, confirmation, validation, and fusion of the disciplines amongst each other that allows the analyst to piece together the whole picture.<sup>75</sup>

The architecture and efficacy of information flows provide the framework to gather information, make pertinent decisions on the operation and direction of the unit, and to control the execution of those decisions. Much of the ability of an unit to forecast is dependent on the structure and functioning of that organization. The organizational structure provides the basis for command, control, coordination, communications, and intelligence.

The structure of an Army unit, division or lower, is set in a standard modified table of organization and equipment (MTOE) configuration.<sup>76</sup> Corps and above structure are determined by their mission and theater they are assigned.<sup>77</sup> However, intelligence architecture for all units, when deployed for stability and support operations, is subject to

modifications due to the national and theater support systems and links that are not generally available in peace or conventional war.

Standard organizational characteristics include the notions of wholeness, growth, differentiation, hierarchical order, dominance, control, and competition. These characteristics must work in unison to give the organization the ability to operate efficiently, or else perish. These show the systems approach to organizations.<sup>78</sup>

The bedlam associated with internal civil strife presents commanders with a chaotic environment in which to provide the necessary stability. In the view of Manuel DeLanda, a noted author on the impact of cybernetic systems, "[A] military command and control structure during wartime must be an island of coherence and stability amid the surrounding turmoil."<sup>79</sup> It must be able to function clearly, concisely, and decisively to assure subordinate elements, as well as the host governments and populace. Alternatively, it cannot hold the reigns of centralized control too tightly. Information flow must run freely throughout the entire organization, each element getting what it needs to do its mission and pass critical information up the chain. Execution must be left in the hands of those on the ground who can directly effect the outcome. This is very true in stability operations. The small-unit on the ground often times has the true picture of the situation, whereas the higher headquarters may not have the proper feel.<sup>80</sup>

Leadership is a condition that influences the course and outcome of the mission. It is the commander's decision that directs the organization. The high cost of errors and the time constraints make the commander's role especially important. In the heat of

operations, where natural and artificial uncertainties abound, the commander's mind provides the vision for execution.<sup>81</sup>

In order for an organization to aid in forecasting, it must optimize the structure for the mission, threat, terrain (including population), and systems available. The organization cannot provide intelligence support efficiently without a clear organizational framework. It is a function of command structure. A lack of unity, coherence, and clarity within the unit degrades from its ability to adequately digest and use intelligence. Other major determinants of the quality of intelligence support are the clarity of the mission, and the relationship between the supported organization and the intelligence producers. The relationship between quality of intelligence requirements and value of intelligence received is an important one.<sup>82</sup>

Data volume entering the headquarters element has expanded exponentially. This increase in volume has provided access to information previously unheard of. However, it also brings its share of problems and challenges as well. The issue does not become one of too little data, but of limiting input to only the right data to make decisions and garner situational awareness. Focusing intelligence requirements to target sets in time and space, and to the PIR helps close the firehose to a steady, but manageable stream.<sup>83</sup>

Different situations require different orders of organization and control. In each operation there is a "window of opportunity" in which critical decisions regarding the personnel and equipment mix must be made. When this "window of opportunity" closes, many of the decisions made regarding organization, manning, and equipping become irreversible. They become part of the time phased force deployment data (TPFDD).

Information gathered and analysis made in the “window of opportunity” has a tremendous impact on setting the conditions for the future success of the operations.<sup>84</sup>

U.S. Army forces will usually be deployed for stability and support operations as part of a joint task force (JTF). A JTF is a temporary organization established to achieve operational-level objectives, and is dissolved when the purpose for its existence has been accomplished or is no longer required.<sup>85</sup> The way in which the JTF J2 is structured, as well as the links to the outside world are necessary conditions for success. A unit may have access to national and theater-level intelligence database and products from wherever they are.

CALL recommends the use of corps-level staffs as the nucleus of rapidly deploying JTF headquarters. Lower echelon staffs require the commitment of scarce resources, both internal and external. The robustness and versatility of the larger staff adds flexibility to the headquarters that just is not resident in smaller organizations.<sup>86</sup>

The make-up in personnel and equipment of the JTF intelligence staff flavor the type, quality, and quantity of products from the start. During Operation RESTORE DEMOCRACY, U.S. Atlantic Command developed and deployed the JTF 190 J-2 staff based on a well-thought out plan and structure. This appears to be the first time such a structure was on paper before it was formed. Appendix A provides the structure and billets.<sup>87</sup>

Personnel selection must be based on demonstrated performance, qualitative attributes, such as language skills, an understanding of the culture, and an understanding of joint operations. The nature of stability and support operations and the short train-up

time to deployment requires the personnel working on the intelligence staff be subject matter experts (SME) in their particular field (analysis, single discipline collection, collection management, or plans) and the SWORD model of low intensity conflict, a knowledge and acumen for the country and culture the mission is in, proficiency on the equipment required to use, and joint experience. The first three requirements are trainable in a unit, the last is a function of the individual's professional history. For augmentees, these requirements should be spelled out specifically and in detail. The joint intelligence staff should have intelligence experts from each of the components. The joint intelligence staff must provide the commander and SIO an understanding of each component's intelligence capabilities, limitations, and requirements.<sup>88</sup>

Military affairs, by their very nature, are fraught with uncertainties. Because of this forecasting has a particularly probabilistic character to it. Analysts need to have the capacity to deal with the uncertainties, difficulties, and false information to come up with best forecast.<sup>89</sup>

Cultural literacy is of utmost importance in counterinsurgency and peace operations. Not only intelligence personnel, but operations and support personnel directly impact on the success of an operation by their deeds and words. Cultural sensitivity can impact severely on the legitimacy of the mission in the eyes of the host populace. Ignorance of the specific culture and circumstances in which the operation functions blinds decision-makers and their representatives to a purely Western orientation toward problem solving. It also tends to turn those in the indigenous population that might have been amiable to U.S. presence in their countries into anti-American patriots. U.S. servicemen

and women do not have to go native. However, cultural sensitivity in planning and execution would go a long way towards easing tensions between the U.S. and some of those we are trying to assist.

The operational command staff should be deployed for the long haul; at least a year. This permanence of presence provides continuity for the combat arms units rotating through an operation. The theater command needs to take special care in selecting personnel, if augmentation is needed. Patience, flexibility, discipline, professionalism, impartiality, tact, and inquisitiveness are all personal qualities desired for peace operations.<sup>90</sup>

Training is as important in peace operations as it is in war, perhaps more so.<sup>91</sup> How to train joint in peace is the issue.<sup>92</sup> The paramount importance of an analysis of this type appears ever so plainly upon deployment of a JTF. The joint community must force the issue if training is to be adhered to by the services. Of course, nothing overrides joint experience.<sup>93</sup> The intelligence community is far better off in this regard than many of the other functional areas, at least in dealing on the joint level. Many of the intelligence positions occur at echelons-above-corps and allow an unprecedented opportunity for junior officer to become familiar with theater and national intelligence capabilities and procedures. Regardless, "Mission execution is more difficult without trained and well-organized staffs, especially in the joint environment of peace operations."<sup>94</sup>

Collective training in garrison, at the Joint Readiness Training Center (JRTC), and in joint headquarters is a must. Familiarity with the kinds of environment, insurgent methods, organizational structures, command and control arrangements, and operations

provides a baseline to develop the standard operating procedures (SOP) and TTPs for the future. The more a staff is exposed to tough, realistic training in these types of missions the better the unit will perform when asked to do so in a real operation. Obviously pre-deployment training cannot match that of the mission embarked upon. However, its value is measured in the outcome of the actual operation.<sup>95</sup>

The implications for planning are tremendous. The results of forecasting become the scientific basis for planning. Military plans determine what is supposed to happen. The practicality and quality of the plans generated by the commander and staff are largely dependent on the accuracy of the forecast.<sup>96</sup>

Planning for counter-insurgency intervention operations occurs during the deliberate decision-making process (DDMP) and/or crisis action planning (CAP) phase. It is indeed fortunate if the contingency in question went through a thorough DDMP before being subjected to the CAP. If the crisis takes place in a region where OPLANs or CONPLANs already exist (i.e. Kuwait), the intelligence picture will likely be well-developed. All that is required then is to dust off the plan, make appropriate modifications, and execute it. This is why OPLAN and CONPLAN development is so important.<sup>97</sup> Time plays a critical role. The time sensitive nature of CAP will sometimes prevent a thorough intelligence estimate of the situation. Not surprisingly, planning time gets progressively shorter the lower the echelon. Hence the criticality of beginning parallel and conceptual planning as soon as the strategic and operational echelons start their planning. Arnold and Stahl respond, "Parallel planning is especially necessary in the early days of crisis response planning when headquarters tend to filter information as it

travels to subordinate commanders.”<sup>98</sup> In the case of the 10th Mountain Division prior to their mission in Somalia, parallel planning would have clarified intelligence coming from echelons-above-corps sources related to tactical IPB.

The SWORD model, along with IPB, should be updated and monitored throughout the planning process. It becomes the focus for the planning process and timeline. Any lurches in the speed of the developments on the ground relative to the model's output helps to delimit the time available to the planner. The model also helps focus the collection effort on the information requirements for continued situation awareness. As Napoleon said, “I may lose a battle, but I shall never lose a minute.”<sup>99</sup>

**VII. SYNERGY.** The different facets of the forecasting model do not act separately and unilaterally. They interact. Just as the pieces of the forecasting model were integral parts to the whole, the processing and analysis, collection, command and control structure, intelligence architecture, personnel, and training are part of the macro-system. A degradation in one area has an impact on the final result.

Several criteria determine the efficacy and validity of a forecasting model: accuracy, completeness, simplicity, relevance, and timeliness. First, the forecasting model must be accurate. Chuyey and Makhaylev state that, “The basic requirement which a model of a process to meet is **accuracy of presentation of the change process of the characteristic in question.**”<sup>100</sup> It must answer the most fundamental issues of the problem in question. If it does not do this, it is not accurate. In the case of our chosen model, the SWORD model, it proved 88.37 percent ( $R^2 = .90$ ) accurate. Of the 10 percent inaccurate readings, all could be explained away by intervening variable.<sup>101</sup>

Despite the impressive showing by the SWORD model, the ten percent wrong forecasts are a cause for concern. Unless the model must not only systematically deal with evolutionary changes in the variables, but must forecast abrupt changes caused by intervening variables as well. A commander that must worry about his model's accuracy may very well do without and be better off.<sup>102</sup>

The use of substandard information will not result in an accurate forecast. The accuracy of the model's result depends on the input and processing of data. As Chuyev and Mikhaylev, noted Soviet operations researchers point out, "[T]he most important task in forecasting...is the analysis and appropriate processing of information, the removal from it of all kinds of distorting "impurities."<sup>103</sup>

The second requirement for a forecasting system is completeness. In other words, does the system take into account all facets of the problem in question. Failure to do so invites involvement by factors external to the model. These factors may potentially have deleterious effects on the results of the model.

The third aspect of forecasting is simplicity. The more difficult the model the more rife with errors the results will be. Users will tend to disavow the utility of the system, and perhaps ignore it as a tool.

The fourth aspect is relevance. This refers to the pertinence of the aspect of the forecasting system to the problem at hand. Obviously, relevance is critical to the success of an operation using such a method.

The final requirement is timeliness. Speed is of the essence in modern warfare and operations. Identifying the enemy's actions before he makes them allows more accurate and rapid countermeasures.

Table 3 depicts the requirements of the forecasting system across the top, and the pieces of our forecasting system along the side. Checks are placed in the blocks that satisfy the intent of the requirement. As can be seen, the model, analysis, and collection components satisfy all of the requirements. Structure is a negative for completeness, simplicity, and rapidity. People are negative for completeness and simplicity. Training does not measure up in completeness and rapidity.

	ACCURATE	COMPLETE	SIMPLE	RELEVANT	TIMELY
MODEL	√	√	√	√	√
ANALYSIS	√	√	√	√	√
INPUT	√	√	√	√	√
STRUCTURE	√			√	√
PEOPLE	√			√	
TRAINING	√		√	√	

Table 3: Evaluation of Forecasting System Variables

On the structure side, few operational commands have all of the assets they need to do stability and support operations. They need to get 'beefed-up' from elsewhere. Most theater commander's use JTFs as the C2 structure in country during stability and support operations, and few are in place. They are incomplete. Of those that are complete, they are understaffed. This may be an artifact of the way the theater commands conduct their business, lack of resources, or other such reasons.

The machinations a theater command must go through to pull a JTF together, debunks any myth that it is simple. They must cull participation from the services

components. In addition, the command and control structure requires intense work to get correct. It takes time to stand up.

Time is a precious commodity in stability and support operations where short-notice deployment are always a possibility. It takes time to gather the necessary people to establish a JTF, train them in the procedures, and get them to coalesce as a team. This is hard enough in garrison; it becomes tremendously difficult on the way to an operation. The fact that JTFs have been wrapped around extant headquarters provides the means to accomplish the task quickly, but imperfectly.

Finding the right people for the job requires time. Most theaters cannot quickly pull together the requisite talent in a short period without considerable assistance from higher echelons, and the services. It is neither simple, complete, nor timely to organize a staff for stability and support operations.

Training is not complete, either individually or collectively. The service schools provide only a modicum of instruction on LIC techniques. A paucity of training and exercises for specific contingencies exists. Language capabilities are lacking for many of the nations and regions in most dire internal circumstances. Training cannot be turned on quickly enough to prepare for stability operations. It must be prepared for early and comprehensively to ensure success.

**VIII. CONCLUSIONS.** The world arena has changed markedly in the past decade. What started with Gorbachev's 'Perestroika' and 'Glasnost', ended in the dissolution of the Soviet Union in 1989. Since then, the large U.S. war machine has found difficulty justifying its large size and expenditure.

Stability and support operations, once viewed as backwater operations, have become more frequent. The demise of the nation-state in some Third-World areas, ethnic and civil unrest, religious fundamentalism, environmental disasters, hunger and malnourishment, and widespread anger and disaffection have increased the call for intervention by the developed nations. Many times the gauntlet has been picked up by the U.S. and the U.N.

The history of the U.S. military is one replete with small LIC-type struggles punctuated with large European-style conventional wars. Presently, no military in the world can stand up to ours and defeat us on the conventional battlefield. This, of course, does not mean no one will try to defeat us. History indicates that the adversaries of the U.S. stand a better chance of defeating us through asymmetrical means. Somalia was a case in point. General Aideed attacked the U.S. through small-unit attacks on U.S.-maintained routes, checkpoints, facilities, bases, and units. He energized the masses to turn the tide against the intervening force.<sup>104</sup>

Still, a problem exists with the forecasting of intra-state conflicts. Most models of the LIC environment lack sufficient detail, and reliability. The SWORD model provides the best explanatory model. It has a 88.37 percent ( $R^2 = .90$ ) accuracy. The 10 percent false results were attributable to external, intervening variables that were difficult to predict. Nevertheless, it appears quite possible to forecast the future direction of intra-state conflicts using the SWORD model.

The ability to forecast is tied to a number of factors that must mesh in a synchronized manner. However, certain criteria must be met. First, the model must

predict that which is in question. Failure to do so condemns the forecast from the start. A basic requirement is that the model have sufficient flexibility and robustness to forecast the future of the conflict. Second, an analytical approach toward applying the model is required. I&W and IPB provides this methodology. The analytical method wrapped around the model gives flexibility. Third, focused intelligence requirements and collection are a must. Information inputs that do not provide direct input to the commander's critical decisions are extraneous. Fourth, make-up and organization of the JTF, as well as the supporting intelligence architecture is critical. Directing the flow of information, controlling intelligence operations, and answering the commander's requirements depend on the structure of the JTF. Last, training is critical before deployment. The locus of individual and collective training must be with maintaining the skills and flexibility to operate in either the conventional or LIC forums. A lost aspect in the equation is the people. People are the linchpins in all operations. Selecting the right people for the job makes all of the difference. This is especially true for augmentees who do not normally train with the base unit. Picking and demanding people that meet certain qualifications provides the baseline for the learning organization to emerge from.

Forecasting is possible through the correct combination of factors. It is the way in which they are pieced together that makes the system work. The base pieces for the system are the SWORD model and IPB. IPB needs a model to apply the methodology to. The results of the integration of IPB and the SWORD model are a powerful means to describe and forecast the direction of intra-state conflicts. Other enabling factors are: the quality of information inputs, the command and control structure, qualified personnel with

the requisite skills, and comprehensive individual and collective training for LIC environments. These enablers allow the IPB and SWORD model to function as they should to provide accurate forecasts. Deficiencies in one area decrease the ability to forecast as a whole. Commanders expect that their intelligence staffs will determine the future trends of any conflict. It is critical that the intelligence system get it right.

Appendix A: JTF-190 J-2 Billet Structure for Operation UPHOLD DEMOCRACY

<u>POSITION</u>	<u>RANK</u>	<u>MOS</u>	<u>SECTION</u>	<u>NO.</u>
DIR, INTEL, J2	O5	35D	J2	1
DEP J2	O4	35D	J2	1
FOR DISC OFF	GS-12	GS-12	J2	1
J2 SGM	E9	96Z5M	J2	1
ADMIN CLERK	E5	71L	J2	1
J2 DIR OPS	O4	35D	J2	1
INTEL OPS/WATCH OFF	O3	35D	J2	3
WATCH NCOIC	E8	96B40	J2	1
WATCH NCO	E6/E5	96R	J2	2
RTO	E4	96D	J2	2
PLANS OFFICER	O4	35D	J2	2
PLANS NCO	E6	97B	J2	1
PLANS CLERK	E4	74C	J2	1
SWWO	O3	C15W3	J2	1
WX FORECAST	E6	1W051A	J2	3
CI OFF	O4/O3	35E	J2	2
CI TECH	WO	351B	J2	1
CI OPS NCO	E7/E6	97B30	J2	2
CI ANALYST	E6/E6	97B20	J2	2
MDCI ANALYST	E6	98C30	J2	1
HUMINT OFF	WO	351B	J2	1
HUMINT NCO	E7/E6/E5	97B30	J2	3
CLERK	E4	97B20	J2	1
SSO OFF	O3	35D	J2	1
SSO NCO	E6/E7	97B30	J2	2
SSO CLERK	E4	74C	J2	1
ADMIN/ILLUSTR	E5/E6	25Q	J2	2
J2 DRIVER	E4/	96B10	J2	1
JTF JIC LNO	O3	35D	J2	2
LNO NCOIC	E7	96B	J2	1
LNO NCO	E5	96B	J2	1
NIST CHIEF	O4	IMMAT	J2	1
NIST COLLECTION MGR	O4	IMMAT	J2	1
INTEL OFF (JDISS)	IMMAT	IMMAT	J2	2
COMMS TECH	IMMAT	IMMAT	J2	2
JILE CHIEF	IMMAT	IMMAT	J2	1
JILE ANALYST	IMMAT	IMMAT	J2	1
JILE COMMS	IMMAT	IMMAT	J2	2
CSG CHIEF	IMMAT	IMMAT	J2	1
SSA ANALYST	IMMAT	IMMAT	J2	2
CSG ANALYST	IMMAT	IMMAT	J2	2
COMMS MAINT TECH	IMMAT	IMMAT	J2	2

DIR JIC	O4	35D	JIC	1
DEP DIR JIC	O3	35D	JIC	1
OPS NCO	E8	96B	JIC	1
CM&D CHIEF	O4	35D	CM&D	1
COLLECTION OFF	O3	35D	CM&D	1
CM&D NCOIC	E7	96D	CM&D	1
REQUIREMENT NCO	E6/E7	98J	CM&D	2
IMINT OFF	O3	35C	CM&D	1
RFI MANAGER	O3	35D	CM&D	2
RFI NCO	E7	96B	CM&D	1
DISSEM OFF	WO	352C	CM&D	1
DISSEM NCO	E5/E6	96B20	CM&D	2
JDISS TECH	E5/E6	IMMAT	CM&D	1
JDISS OP	E5/E6	IMMAT	CM&D	2
STICS OP	E5	98C	CM&D	2
MITT NCOIC	E7	98J	CM&D	1
MITT OP	E6	98D/J	CM&D	2
MITT OP	E4	98J	CM&D	2
TROJAN OP	E6	96D	CM&D	1
TROJAN OP	E5	96B	CM&D	1
TROJAN OP	E4	33T	CM&D	1
COMMS STAFF NCO	E7	31V	CM&D	1
COMMS TECH	E5/E6	IMMAT	CM&D	1
NETWORK ADMIN	E6/E5	74C10	CM&D	1
INTEL SYS TECH	E6/E5	96D20	CM&D	1
ADMIN NCOIC	E5	71L	CM&D	1
GRAPHICS ILLUSTR	E4	25Q	CM&D	1
CH CURR ANALYSIS	O4	35D	ALL SOURCE DIV	1
SR INTEL ANALYST	E7	96B40	ALL SOURCE DIV	2
GRN TM LDR	O3	35D	ALL SOURCE DIV	2
OB TECH	WO	350B	ALL SOURCE DIV	2
INTEL ANALYST	E6	98C30	ALL SOURCE DIV	1
INTEL ANALYST	E5	96B20	ALL SOURCE DIV	5
INTEL ANALYST	E4	98C10	ALL SOURCE DIV	2
IMINT NCO	E7	96D40	ALL SOURCE DIV	1
IMINT ANALYST	E5	96D20	ALL SOURCE DIV	2
NAV/AIR ANALYST	E5/E6	IMMAT	ALL SOURCE DIV	2
SS SIGINT OFFICER	O4/O3	35G	ALL SOURCE DIV	2
SS TECH	WO	352C	ALL SOURCE DIV	2
SS ANALYST	E6/E5	98C20	ALL SOURCE DIV	6
SS ANALYST	E3	98C10	ALL SOURCE DIV	1
TGT/BDA BR OFF	O4/O3	35D	ALL SOURCE DIV	2
BDA NCO	E7		ALL SOURCE DIV	1
STICC/TACSAT OP	E3/E4/E6	IMMAT	ALL SOURCE DIV	2
INTEL OFF	O5	IMMAT	J5	1

INTEL OFF	O4	IMMAT	J5	2
INTEL NCO	E6/E7	IMMAT	J5	1
MC&G CHIEF	O4/O3		MC&G	1
TERRAIN TECH	WO	15D	MC&G	1
MC&G NCO	E7		MC&G	1
TERRAIN NCO	E7	81Q4P	MC&G	1
TA NCO	E6	81Q30	MC&G	2
TA ANALYST	E5/E4/E3	81Q10	MC&G	5

## ENDNOTES

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<sup>1</sup> Stability and support operations is the proposed name for peace operations in the future version of FM 100-5. This term more clearly reflects the reality of the situation for those on the ground. This monograph will use the term stability and support operation as opposed to peace operation.

<sup>2</sup> U.S. Army, *FM 100-5, Operations*, (Washington, D.C.: Department of the Army, June 1993), 3-1.

<sup>3</sup> John Shy and Thomas W. Collier, "Revolutionary War," in *Makers of Modern Strategy*, ed. Peter Paret (Princeton: Princeton University Press, 1986) 818.

<sup>4</sup> Crane Brinton, *Anatomy of Revolution*, (New York: Vintage Books, 1965), 65.

<sup>5</sup> Samuel P. Huntington, "The Clash of Civilizations?," *Foreign Affairs*, Summer 1993, 22.

<sup>6</sup> Robert Kaplan has discussed his pessimistic views of the breakdown and demise of the nation-state structure in the third world in such works as "The Coming Anarchy," *The Atlantic Monthly*, February 1994, 44-48; *Balkan Ghosts*, (New York: St. Martin's Press, 1993); *The Ends of the Earth*, (New York: Random House, 1996).

<sup>7</sup> Shy and Collier, "Revolutionary War," 817.

<sup>8</sup> Yu. V. Chuyev and Yu. B. Mikhaylov, *Forecasting in Military Affairs, A Soviet View*, trans. Government of Canada (Washington, D.C.: U.S. Government Printing Office, 1975), 5.

<sup>9</sup> *Ibid.*, 70-71.

<sup>10</sup> *Ibid.*, 8.

<sup>11</sup> CIA, *Guide to the Analysis of Insurgency*, n.d., 2.

<sup>12</sup> JCS, *Joint Pub 1-02: DOD Dictionary Military and Associated Terms with JMTGM changes*, (Washington, D.C.: Joint Chiefs of Staff, March 1994), 205.

<sup>13</sup> Chuyev and Mikhaylov, *Forecasting in Military Affairs, A Soviet View*, 8.

<sup>14</sup> *Ibid.*, 6.

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- <sup>15</sup> Brinton, *Anatomy of Revolution*, 65.
- <sup>16</sup> *Ibid.*, 65.
- <sup>17</sup> Alan Beyerchen, "Clausewitz, Nonlinearity, and the Unpredictability of War," *International Security* 17, no. 3 (winter 92/93): 90.
- <sup>18</sup> Mitchell M. Waldrop, *Complexity: The Emerging Science at the Edge of Chaos*, (New York: Simon and Schuster Inc., 1992), 11-12.
- <sup>19</sup> James J. Schneider, "The Theory of Operational Art," Theoretical Paper No. 3, Fort Leavenworth: School of Advanced Military Studies, U.S. Army Command and General Staff College, 1 March 1988, 4-5.
- <sup>20</sup> Waldrop, *Complexity: The Emerging Science at the Edge of Chaos*, 176-179.
- <sup>21</sup> Max G. Manwaring and John T. Fishel, "Insurgency and Counter-insurgency: Toward a New Analytical Approach," *Small Wars and Insurgencies* 3, no. 3 (winter 1992): 273.
- <sup>22</sup> *Ibid.*, 274.
- <sup>23</sup> Rod Paschell, *Low Intensity Conflict 2010*, (McLean: Brassey's (U.S.), Inc., 1990), 31.
- <sup>24</sup> Ted R. Gurr, *Why Men Rebel*, (Princeton: Princeton University Press, 1970), 190.
- <sup>25</sup> CIA, *Guide to the Analysis of Insurgency*, 2.
- <sup>26</sup> *Ibid.*, 3.
- <sup>27</sup> James J. Schneider, "The Eye of Minerva: The Origin, Nature, and Purpose of Military Theory and Doctrine," Theoretical Paper No. 5, Fort Leavenworth: School of Advanced Military Studies, U.S. Army Command and General Staff College, 1986, 9.
- <sup>28</sup> Manwaring and Fishel, "Insurgency and Counter-insurgency: Toward a New Analytical Approach," 282.
- <sup>29</sup> *Ibid.*, 283.
- <sup>30</sup> *Ibid.*, 281-82.

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<sup>31</sup> Ibid., 288-289.

<sup>32</sup> Ibid., 284.

<sup>33</sup> Ibid., 284-285.

<sup>34</sup> U.S. Army, *Operation UPHOLD DEMOCRACY Initial Impressions: HAITI D-20 to D+40*, (Fort Leavenworth: Center for Army Lessons Learned, December 1994), iv.

<sup>35</sup> Manwaring and Fishel, "Insurgency and Counter-insurgency: Toward a New Analytical Approach," 284-87.

<sup>36</sup> Crane Brinton originally wrote his historic work in 1938. It has survived over half a century as one of the seminal works on the inner workings and characteristics of revolutions. His approach was an empirical, scientific one that focused on the uniformities and differences between the English, French, Russian, and American revolutions. Brinton's theory was substantiated by Major James H. Muhl, Jr. in his 1990 monograph "The Iranian Revolution: Revalidating Crane Brinton's Model of Revolutions for the Operational and Strategic Planner," Fort Leavenworth: School of Advanced Military Studies, U.S. Army Command and General Staff College.

<sup>37</sup> Brinton, *The Anatomy of Revolution*, 69.

<sup>38</sup> U.S. Army, *Field Manual 34-130: Intelligence Preparation of the Battlefield*, (Washington, D.C.: Department of the Army, July 1994), iv.

<sup>39</sup> Ibid., 1-1.

<sup>40</sup> Ibid., 6-17 - 6-18.

<sup>41</sup> Clausewitz, *On War*, 81.

<sup>42</sup> U.S. Army, *Operation RESTORE HOPE Lessons Learned Report: 3 December 1992 - 4 May 1993*, (Fort Leavenworth: Center for Army Lessons Learned, November 1993), I-17.

<sup>43</sup> JCS, *Joint Pub 2-0: Intelligence Support to Operation*, Washington: Joint Chiefs of Staff, 1995, vii.

<sup>44</sup> U.S. Army, *Field Manual 34-130: Intelligence Preparation of the Battlefield*, 5-1.

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<sup>45</sup> S.L. Arnold and David T. Stahl, "A Power Projection Army in Operations Other Than War," *Parameters* 23, no. 4, (winter 1993-94), 7.

<sup>46</sup> U.S. Army, *Operation RESTORE HOPE Lessons Learned Report: 3 December 1992 - 4 May 1993*, I-17.

<sup>47</sup> Ibid., I-18.

<sup>48</sup> Ibid., I-19.

<sup>49</sup> Charles E. Valentine, "IPB in a LIC Environment," *U.S. Army Aviation Digest*, (November/December 1993), 40.

<sup>50</sup> James B. Motley, *Beyond the Soviet Threat: The U.S. Army in a Post-Cold War Environment*, (Lexington: Lexington Books, 1991), 98.

<sup>51</sup> U.S. Army, *Operation RESTORE HOPE Lessons Learned Report: 3 December 1992 - 4 May 1993*, I-19.

<sup>52</sup> Schneider, "The Theory of Operational Art," 27.

<sup>53</sup> Jay M. Smith, "Operational Art in Military Operations Other Than War," Newport: Naval War College, 1995, 8

<sup>54</sup> Manwaring and Fishel, "Insurgency and Counter-insurgency: Toward a New Analytical Approach," 285.

<sup>55</sup> Schneider, "The Theory of Operational Art," 28.

<sup>56</sup> Ibid.

<sup>57</sup> U.S. Army, *FM 34-7: Intelligence and Electronic Warfare Support to Low-Intensity Conflict Operations*, (Washington, D.C.: Department of the Army, May 1993), 5-1.

<sup>58</sup> U.S. Army, *Field Manual 34-1: Intelligence and Electronic Warfare Operations*, (Washington, D.C.: Department of the Army, September 1994), 2-17.

<sup>59</sup> JCS, *Joint Pub 2-0: Intelligence Support to Operation*, 15.

<sup>60</sup> Ibid., IV-8.

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<sup>61</sup> Charles T. Purkiss, "Intelligence Requirements for Low-Intensity Conflicts," in *Low Intensity Conflict and Modern Technology*, ed. David J. Dean (Maxwell Air Force Base: Air University Press, 1986), 185.

<sup>62</sup> U.S. Army, *FM 34-8: Combat Commander's Handbook on Intelligence*, (Washington, D.C.: Department of the Army, September 1992), A-1 - A-2.

<sup>63</sup> Arnold and Stahl, "A Power Projection Army in Operations Other Than War," 8.

<sup>64</sup> *Ibid.*, 8-9.

<sup>65</sup> Motley, *Beyond the Soviet Threat: The U.S. Army in a Post-Cold War Environment*, 92.

<sup>66</sup> Purkiss, "Intelligence Requirements for Low-Intensity Conflicts," 184.

<sup>67</sup> Motley, *Beyond the Soviet Threat: The U.S. Army in a Post-Cold War Environment*, 96

<sup>68</sup> Kenneth Allard, *Somalia Operation: Lessons Learned*, (FT McNair: National Defense University Press, 1995), 74.

<sup>69</sup> U.S. Army, *FM 34-7: Intelligence and Electronic Warfare Support to Low-Intensity Conflict Operations*, 5-1.

<sup>70</sup> *Ibid.*

<sup>71</sup> U.S. Army, *Haiti: The U.S. Army and United Nations Peacekeeping. Initial Impressions Report, vol. III*, (Fort Leavenworth: Center for Army Lessons Learned, July 1995), 47.

<sup>72</sup> JCS, *Joint Pub 2-0: Intelligence Support to Operation*, IV-5.

<sup>73</sup> U.S. Army, *FM 34-7: Intelligence and Electronic Warfare Support to Low-Intensity Conflict Operations*, 5-6 - 5-9.

<sup>74</sup> Smith, "Operational Art in Military Operations Other Than War," 6.

<sup>75</sup> J.R. Bondanella, E.M. Cesar, Jr., P.D. Allen, P. Propper, and C.L. Shipbaugh, *Estimating the Army's Requirements and Capabilities for 1997-2001*, (Santa Monica: RAND, 1993), 56.

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<sup>76</sup> U.S. Army, *FM 71-100: Division Operation*, (Washington, D.C.: Department of the Army, June 1990), 1-1.

<sup>77</sup> U.S. Army, *FM 100-15: Corps Operation*, (Washington, D.C.: Department of the Army, June 1996), 1-1.

<sup>78</sup> Ludwig von Bertalanffy, *General Systems Theory*, (New York: George Braziller, 1968), 47.

<sup>79</sup> Manuel De Landa, *War in the Age of Intelligence Machines*, (New York: Swerve Editions, 1991), 60.

<sup>80</sup> Ibid., 79.

<sup>81</sup> Ibid., 53.

<sup>82</sup> Michael H. Schoelwer, "The failure of the U.S. Intelligence Community in Low-Intensity Conflict," in *Low-Intensity Conflict: The Pattern of Warfare in the Modern World*, ed. Loren B. Thompson, (Lexington: Lexington Books, 1989), 160.

<sup>83</sup> Jeffrey T. Richelson, "Volume of Data Cripples Tactical Intelligence System," *Armed Forces Journal*, (June 1990), 35-36.

<sup>84</sup> U.S. Army, *Operation RESTORE HOPE Lessons Learned Report: 3 December 1992 - 4 May 1993*, I-24 - I-26.

<sup>85</sup> JCS, *Joint Pub 3-0: Doctrine for Joint Operations*, (Washington, D.C.: Joint Chiefs of Staff, February 1995), II-13.

<sup>86</sup> Ibid., 11.

<sup>87</sup> U.S. Army, *Operation UPHOLD DEMOCRACY Initial Impressions: HAITI D+20 to D+40*, 77.

<sup>88</sup> JCS, *Joint Pub 2-0: Intelligence Support to Operation*, IV-7.

<sup>89</sup> Chuyev and Mikhaylov, *Forecasting in Military Affairs, A Soviet View*, 25.

<sup>90</sup> U.S. Army, *FM 7-98: Operations in Low Intensity Conflict*, (Washington, D.C.: Department of the Army, October 1992, 4-25.

<sup>91</sup> Allard, *Somalia Operation: Lessons Learned*, 38.

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- <sup>92</sup> Chuyev and Mikhaylov, *Forecasting in Military Affairs, A Soviet View*, 21.
- <sup>93</sup> U.S. Army, *Operation RESTORE HOPE Lessons Learned Report: 3 December 1992 - 4 May 1993*, 10.
- <sup>94</sup> Allard, *Somalia Operation: Lessons Learned*, 61.
- <sup>95</sup> Chuyev and Mikhaylov, *Forecasting in Military Affairs, A Soviet View*, 60.
- <sup>96</sup> Ibid., 15.
- <sup>97</sup> Armed Forces Staff College, *AFSC Pub 1: The Joint Staff Officer's Guide 1993*, (Norfolk: National Defense University, n.d.), 7-7.
- <sup>98</sup> Arnold and Stahl, "A Power Projection Army in Operations Other Than War," 4-41.
- <sup>99</sup> David G. Chandler, *The Campaigns of Napoleon*, (New York: MacMillan Publishing Company, Inc., 1966), 149.
- <sup>100</sup> Chuyev and Mikhaylov, *Forecasting in Military Affairs, A Soviet View*, 70.
- <sup>101</sup> Manwaring and Fishel, "Insurgency and Counter-insurgency: Toward a New Analytical Approach," 283.
- <sup>102</sup> Chuyev and Mikhaylov, *Forecasting in Military Affairs, A Soviet View*, 26.
- <sup>103</sup> Ibid., 36.
- <sup>104</sup> U.S. Army, *U.S. Army Operations in Support of UNOSOM II: 4 MAY 93 - 31 MAR 94*, (Fort Leavenworth: Center for Army Lessons Learned, n.d.), K-2 - K-3.

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